



GILMAN'S RURAL WORLD

DEVOTED TO AGRICULTURE HORTICULTURE HORSES CATTLE SHEEP SWINE ETC.

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GOLMAN'S RURAL WORLD

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SPECIAL OFFER.

While the regular subscription price for the RURAL WORLD will remain at one dollar per year, yet, in order to more than double our present circulation for the year 1900 we have determined for a brief period to allow all of our present subscribers to renew their subscriptions by sending the name of a NEW subscriber with their own for one dollar—thus getting two papers for one year for only one dollar. In all cases, however, the additional name or names must be new subscribers. Renewals will not be received at fifty cents, except when accompanied by a new subscriber. Two NEW subscribers at the same time, however, will be received for one year for one dollar. New subscribers can also send additional new subscribers on the same terms. This is below the actual cost of the paper. But so anxious are we to have the RURAL WORLD enter tens of thousands of new homes that we are willing to make this low offer. We know the RURAL WORLD is doing a grand work in uplifting the farmer, and we are more than anxious that its benefits shall be extended to the widest limits, hence this special offer. We hope to have 100,000 subscribers on our list for 1900.

THE FARMERS OF TENNESSEE

Will be especially interested in this issue of the RURAL WORLD, because of the illustrated article on this page, descriptive of the work that is being done at the State Experiment Station for the advancement of Tennessee agriculture, and the report of the West Tennessee Fruit Growers' meeting, which will be found on page three.

The RURAL WORLD is pleased to note that the present management of the Tennessee Experiment Station seems to be doing good work and such as will be of much service to the farmers of the state if given proper heed. There is, as appears from the report of the West Tennessee Fruit Growers' meeting, a disposition to criticize the station management, and to assume that better work would be done if the station were located in the strawberry region of the western part of the state. The RURAL WORLD sympathizes with the fruit growers in their desire to get information, but if a successful effort were to be made to transfer the station from Knoxville to a point in West Tennessee in the midst of the small fruit district, and it be converted into a fruit experiment station, would not the farmers and stock men in other parts of the state feel that they had been unjustly treated? The work of an agricultural experiment station must be comprehensive, and it hardly matters where it is located in a state, the work can be made very helpful to all sections, no matter how different they may be in soil, topography or otherwise. If the station workers are anxious to serve all interests, it is possible to add to the effectiveness of the work by locating sub-stations in different sections of the state where peculiar conditions exist and special lines of farming have been developed. But if this is done these local relations should by all means be connected with the State Station in such a manner that work and equipment shall not be unnecessarily duplicated. The legislature of Missouri, in our opinion, made a mistake in establishing a Missouri Fruit Experiment Station independent of the State Station at Columbia. Local rather than general interest dictated the action.

We are decidedly of the opinion that if the fruit growers of West Tennessee will take hold of the matter in the right way, manifest to the station workers at Knoxville a spirit of co-operation and confer with them as to the establishment of a substation for horticultural experiments in the region devoted to that line of farming, and then make a united appeal to the state legislature at the next session for financial assistance, their desires will be gratified. In the meantime the special farmers in the different sections of the state should watch closely the work that is being done at Knoxville; for there is much being done there that will be helpful to any tiller of the soil in the state if he will only profit by it.

EXPERIMENT WORK

At the Tennessee Agricultural Experiment Station, Knoxville, Tenn.
Editor RURAL WORLD: The idea and purpose of an experiment station are often misunderstood. Many think that it is an office to furnish information on any and all subjects in the world. This is an error. Its proper function is to make original and scientific investigations and to disseminate knowledge concerning them. Scientific facts of real use are not

use only good seed. It is astonishing to find how trashy some of the seed offered for sale is; some seed secured at this station has proved to be one-half waste and mixed with all sorts of obnoxious weeds. In our seed laboratory, an experimental test of all grains sown in our plots will be made and recorded to show the importance of this matter. This will illustrate the importance of seed selection and impress the necessity of the farmers growing more of their own seed.
A pot experiment is under way to study

the farm crops. A relative study of the merits of corn stover and silage is in progress. If shredded corn stover is the equal of silage for feeding, it is of vast importance to the farmers of our state. This year when food products are extremely high and hard to secure, there are waiting in the fields of Tennessee several million dollars' worth of corn stalks. If these had been ensiled or shredded, the present difficulty of securing roughage would have been solved.

Visitors are always welcome at the station. The publications are free and we ask the cordial support of the farmers of the state in the development of our work. We are always willing to receive suggestions, and other problems of the farmers and to help them in every possible way. We believe we can do this effectively, but we in turn must have the sympathy, interest and aid of our constituents, if our work is to be successful.

In the new agricultural building which will soon be erected considerable space will be devoted to the study of cheese and butter making, and other problems of an experimental nature related to the welfare of Tennessee agriculture.

This department has recently completed a study of the conformation of the cow and of the steer; handsome illustrations have been prepared and a bulletin will soon be issued on this subject. It will indicate, in so far as can be done by words and pictures, the type of animal to be sought for various purposes and the type that is likely to prove unsatisfactory and unremunerative.

A macadam road has recently been completed on the University farm. The purpose was to put down a road to give facility in moving over the farm, but especially as an object lesson to farmers visiting us from time to time. The importance of good roads is now clearly recognized. The greatest drawback to rural life has been the lack of facilities of transportation. The economy with which macadam roads can now be constructed and their general effectiveness has removed one of the greatest objections to country life. The fact that they promote culture, that they give ease of transportation, that they increase mobility, that they present a pleasing aspect to the traveler and increase the value of farm lands in their vicinity, should be sufficient to stimulate greater efforts for their general construction throughout the rural districts. A bulletin will be prepared on the cost and methods of construction of roads, carefully illustrated, so as to place the knowledge concerning the importance and value of roads within the reach of all.

ANDREW M. SOULE, Agriculturist.
Knoxville, Tenn.
The influence of lime on the upland clays of Tennessee, also on the principal type soils of the state. It is thought that many of our soils that are now apparently exhausted may be brought into active and profitable production by the use of green manuring and liming. The object of this experiment is to demonstrate, if possible, the feasibility of this plan.
The department has been feeding eight grade Shorthorn steers during the past winter. The object is to study the cost of beef production in Tennessee and to endeavor to find the most economical com-



ANDREW M. SOULE, Professor and Agriculturist, University of Tennessee.

discovered in a minute. A thousand of the sayings that are constantly passed from mouth to mouth and regarded as unimportant and insignificant have required for their solution many years of patient inquiry. The only hope for successful work by an experiment station is the adoption of a definite policy and the pursuance of this with uninterrupted zeal for a number of years. It takes time to secure experimental data of value. We ask our readers to bear this fact in mind and exercise due consideration, if all their questions are not answered off-hand as they expect.

The first feature of the work at the Tennessee Station that we desire to call attention to is the plot work now being prosecuted. This will comprise something like four hundred and fifty plots 1-100 and 1-50 of an acre in area. On these plots investigations will be conducted with varieties of wheat and other grains, and the fertilizers adapted to the production of these respective crops. In another series, cultural experiments will be undertaken, including the control of soil moisture. A three, four and five years' rotation of crops will be established, and the influence of different methods of cultivating the land studied. The object of this work is to discover the best means of reclaiming and renovating our worn-out farms. The failure to follow a rotation of crops and the general neglect of the soil makes this character of work especially urgent. Forty plots will be devoted to this research. The establishment of pastures and the introduction of new hay crops is a line of work worthy of careful study. Fifty plots will be given to varieties, mixtures, yields and digestibility of the various grasses; also those best adapted for lawns, for hay and for pasture.

A genuine misfortune has overtaken our farmers in the failure of the red clover crop. The exigencies of the situation require an examination into the cause of this failure, and if possible the discovery of a specific remedy. With this object in view, fifty plots will be devoted to the study of the clover problem. Different methods of seeding, the utility of various nurseries crops and the preparation of the land will constitute some of the questions considered.

Something like fifty plots will be given to mixtures of forage crops for green feeding and hay; a study of the yields and digestibility will also be made at the same time. The importance of stock and dairy husbandry in this state makes this work particularly appropriate. The fact that we are subject to a period of drought through the summer season when pasture and food supplies are scant and difficult to secure, gives added interest to this enterprise.

In another range the various legumes will be grown in succession year after year for the purpose of determining the relative amount of nitrogen brought to the soil by the different crops and the influence of one leguminous crop following another. Cultural and breeding experiments with corn will receive the attention that their importance merits. The origination of new varieties of cereals is an important problem. With added facilities supplied in our new laboratories, we will be in position to conduct this line of work on an intelligent basis.
It is important that the farmer should

bination of feed stuffs for beef production. The farmers have been selling their stock to northern buyers for winter feeding. Seeing that Tennessee soils are as productive as those of other states, and that as great a variety of forage crops can be grown for feeding stuffs, and considering the proximity of our markets, it seems that these cattle should be kept here and fattened in the state. A double profit might then be made, namely, that from growing and selling the steers from the pastures, and that from stall feeding for the winter and spring markets. The greatest difficulty the feeder has to contend with at the present time is the dearth of animals of the proper type for feeding. This is particularly unfortunate but the remedy is within easy reach. By crossing our common stock with improved sires of the leading beef breeds, suitable animals can be secured for this purpose. As these animals can be fed at less cost and as they will mature at an earlier age, it will enable the feeder to secure a larger profit for the time and money invested in stock husbandry.



EXPERIMENTAL WHEAT PLOTS. UNIVERSITY OF TENNESSEE.

ANDREW M. SOULE, Agriculturist.
Knoxville, Tenn.
The influence of lime on the upland clays of Tennessee, also on the principal type soils of the state. It is thought that many of our soils that are now apparently exhausted may be brought into active and profitable production by the use of green manuring and liming. The object of this experiment is to demonstrate, if possible, the feasibility of this plan.
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An extensive feeding experiment with dairy cows has been inaugurated. An endeavor will be made to determine the influence of feeding forage plants rich in protein, as compared with grains rich in protein. If the protein from these two sources is equally effective in milk and butter production, it will prove a great advantage to the farmers of Tennessee. The cow pea and other leguminous plants render protein, usually the most expensive element of a feedstuff, comparatively cheap in this state.

In addition to the work already outlined, field experiments will be undertaken to study the best means of controlling soil moisture, the best methods of culture to the production of corn, the desirability of various forage crops to supply green foods in the dry season, and a general study of the distribution of the roots of

NUBS OF NEWS.

From the Missouri Agricultural College.

Editor RURAL WORLD: The Short Winter Courses in Agriculture at the Missouri College closed on March 23. The total enrollment reached 45, most of the students being representatives of the best farming classes of this and other states; many of the class were graduates of high schools, and some had college training. At a mass meeting of the class, the following resolutions were voluntarily adopted:

Resolved, That the course which has just closed has been well adapted to our needs, and that we appreciate the earnest and zealous efforts of the instructors, and the interest shown in our behalf; and that we hereby express to them our sincere thanks and gratitude.
Resolved, Also, that a copy of these resolutions be transmitted to each of the newspapers of Columbia, and that a copy be sent to each of the several instructors.

Signed:
J. C. KIRKLEY, Savannah, Mo.
GEO. M. LUNT, Talbot, Iowa.
WRIGHT CLARKE, Jefferson City, Mo.

Committee.
Soil Physics Laboratory.—The Missouri College has within the past month fitted a new laboratory with complete equipment for work in soil physics and the mechanical analysis of soils. The working apparatus now on hand consists of high power microscopes, delicate and coarse balances, drying ovens, sieves, crucibles and all other laboratory glassware necessary for accurate work with soils.

The most important addition to the equipment is a collection of 90 metal soil tubes, made to order, varying in height from 8 to 28 inches, all having the same surface area and being fitted with a water reservoir at the bottom and a tight cover for the top. These tubes have been filled with various kinds of soil, representing the different types found in Missouri. Students now are able to experiment with the many questions of vital interest to the farmer, such as the moisture holding power of different soils, rate of evaporation from the surface under different methods of tillage; rate of percolation through earth, capillary power of soils, influence of different mulches, effect of plowing, rolling, etc. A special class of eight advanced students are now taking this work under direction of Prof. F. B. Mumford.
Additions to Agricultural Museum.—The college has recently purchased for its museum a complete set of the different grades and types of wool, over 600 in number. These samples were exhibited at the Omaha Exposition by the New York Wool Exchange, and represent all kinds of wool fiber that could be found on the market. They will afford a valuable field for study in this line.
The American Glucose Company has donated to the college a complete set of samples of all the products derived from corn, about 35 in all. These products are exhibited in glass jars, and include several kinds of sugar, starch, dextrin, glucose, corn oil, corn cake, bran and other cattle feeds, compressed pith, brown paper, and a substitute for rubber. It is a very interesting exhibit, and shows what undeveloped resources there are in this kind of plants—corn.
The college has also received a donation from different firms of several brands of stock food, appetizers, condiment powders, new dairy feeds, etc., samples of which have been placed in the museum. Some feeding tests and chemical analysis will also be made of each.
Library of Agriculture.—The library of the Agricultural College has been strengthened by the purchase of over 500 new books, and the binding of all the publications already on file. A valuable prize was secured in purchasing a set of the early Shorthorn herd books from the estate of the late R. A. Paxton, of Virginia. These herd books proved to be the original books owned by the famous Shorthorn breeder, Thomas Bates, of England, and contain on many pages the marginal notes and explanations of Mr. Bates in his own handwriting, and signed in each instance with his name. These notes are invaluable in pointing out clearly the objects this pioneer breeder hoped to produce by the mating of certain animals, and showing the results attained. The college is to be congratulated on pos-

sessing this treasure. Complete sets of the transactions of the Royal Agricultural and Horticultural Societies of England and Scotland have been purchased and bound, amounting to over 100 volumes. The bulletins and reports of all the experiment stations of the United States, and the numerous reports and pamphlets issued by the U. S. Department of Agriculture have been bound in permanent form, aggregating nearly 300 volumes. The library also maintains in bound form complete files of all the leading agricultural papers of the world. It now has complete sets of the oldest and most important agricultural journals from the beginning of their publication to the present time. There has also recently been purchased complete sets of the Trotting and Saddle Horse Registers, the Berkshire and Poland-China Herd Books and Shropshire and Merino Sheep Records. The library has for some time had complete files of the most important stock books, the Shorthorn Herd Books, Hereford Record, Holstein-Friesian and Jersey Registers, and all of the most modern text books on agricultural and animal industry. This library now forms as complete and efficient a laboratory for research work and study as can be found in printed pages.

Missouri Weather Bureau Service.—The Missouri Section of Climate and Crop Service of the U. S. Weather Bureau, located in the Agricultural College at Columbia, has been greatly improved by the recent addition of an assistant meteorologist to the force. Mr. H. C. Miller has been detailed to fill the place, and will begin his duties at once. For the past year he has been in the Weather Bureau Service at Kingstown, Jamaica, but was formerly a resident of Viroqua, Wisconsin. The salary of A. E. Hackett, Director of the Missouri Section, has also been increased. The edition of the weekly crop bulletin, which is printed during the growing season, was increased to 2,000 copies, in order to be able to supply not only the correspondents and newspapers, but also a large number of the more important post offices of the State which have agreed to post the information for the benefit of the public. The Bureau expects soon to be able to publish several hand-books and bulletins giving a complete history and description of Missouri's climatology.

Pleased With the Silo.—Mr. John Patterson, of Kirksville, Mo., former president of the State Dairyman's Association, decided two years ago to grow cow-peas for his dairy cattle. When the time came to harvest his peas, the season was so wet that he saw no opportunity to cure his cow-pea hay. He had often heard of the silo, but had never raised his faith to the point of investing in one. But with the chance of a lost crop staring him in the face, he hurried to town, bought enough lumber, and immediately built a large stave silo for his peas. They were soon harvested and put in the silo, and were the delight of his life during the winter months. He reports that he never had cows do so well before. This year he is estimated at about 200,000.00 pounds of silage, and storing away not only cow-peas, but an immense acreage of corn as well. He has tried mixing corn and cow-pea silage one winter, with very satisfactory results. Mr. Patterson now thinks that every dairy farmer should by all means have a silo.
C. L. WILLOUGHBY, Columbia, Mo.

PEBBLES FROM THE POTOMAC.

Editor RURAL WORLD: The statistician of the Agricultural Department shows the amount of wheat remaining in farmers' hands on March 1, 1900, to be, approximately, 128,700,000 bushels, or 29 per cent of last year's crop. The surplus of corn held by the farmers is estimated at 77,700,000 bushels, or 37.5 per cent of last year's crop. The supply of oats on hand is estimated at about 200,000,000 bushels, or 35.5 per cent of last year's crop.

SMALL SAVINGS.—It is a saying that has passed into a proverb that if we look out for the pennies the dollars will take care of themselves. If we were to compute the enormous sums of money lost annually on the one item of neglected farm machinery the sum would be so immense as to place the old saying that figures don't lie to a rigid inspection as to the accuracy of the assertion. We have seen in our day plows, reapers, carriages—in fact, farming implements of every description—being destroyed by rain, frost and snow. Each implement, if not absolutely destroyed, was impaired in usefulness, and estimating the loss to be from a few pennies up to several dollars, the aggregate loss must necessarily reach high up in the millions. To one farmer perhaps the loss from neglected implements is small, but in the aggregate the penny manifests its irresistible influence. We read a few days ago some interesting statistics regarding sugar which will serve to illustrate clearly the power of the little copper coin. If the sugar trust could dispose of all the inhabitants of the United States to use one lump more of sugar in every cup of tea or coffee the increase of profit would be astonishing. Estimating that 50,000,000 people drink tea or coffee, the increase would be 100,000,000 lumps a day, morning and evening; or 35,000,000,000 lumps a year. Estimating 74 lumps to a pound this would make 48,000,000 pounds, which at 52 a pound would yield an annual increase to the sugar syndicate of a modest sum of nearly twenty-five mil-

lion, dollars!!! Notwithstanding these startling and sensational statistics we elaborate our conscience against plain facts and proceed to waste with a recklessness that passes beyond a logical analysis.

The farmer is not alone in this waste of what represents in the aggregate millions. What he loses is often caused by neglect. The waste, a criminal waste, of a certain class of people in the way of food, is touched upon by an eminent European essayist, who says: "The millionaire squanders the results of man's labor to gratify his whims, his love of luxury or his vanity. He throws aside clothing which is far from being no longer serviceable. He builds houses of unnecessary size and fills them with superfluous furniture. He takes men away from useful production and maintains them in criminal idleness as lackeys and companions, or in semi-occupation as coachmen, body servants, etc. But in regard to provisions, he consumes more than four times what he actually requires to satisfy his actual wants, even making allowance for the most wasteful housekeeping. Let us assume that there are a million of such extravagant beings in the civilized world; with their families we can estimate the number at five millions. These five millions would consume provisions sufficient for twenty millions, so that in addition to their own natural share they use up that of fifteen million other human beings." In concluding our observations on this subject let us suggest a moral: "Waste not, want not."

A FAMOUS THOROUGHFARE.—Pennsylvania avenue is said to be one of the broadest and most famous avenues in the world. From the Capitol to the White House is about a mile, and a stroll from the home of the lawmaker to the home of the President on a bright sunny day is full of interest. Pennsylvania avenue was laid out with an idea of plenty of room, and the wisdom of this plan has been amply demonstrated, as immense processions have on numerous occasions, to the music of many bands, kept step on the way to the White House; or the shrill tones of the life and soul-stirring sound of the drum have, as the soldier marched side by side, brought back to him the days of long ago, "When all was quiet on the Potomac."

On this far-famed thoroughfare may be seen people from all quarters of the globe. Queer people from the Orient, dressed in the colors of the rainbow; the sulleyed Sioux, strolling silently and fro, with their blankets and their beads; or perhaps a dignified Cherokee, with his beaver and spike-tailed coat, busily contemplating the passing scenes or perhaps arranging his speech to deliver to the Great Father. The street has an animated appearance. Street cars, like giant yellow and green bugs, run to and fro, and the car that is appalling: swift-flying automobiles, with their elegant carriages, with coachmen, two, manly and dignified, of dancing, prancing, elaborately caparisoned steeds, which glide gracefully by. This picture is incomplete without the vehicle to groan not unlike a despairing spirit in dire distress. The first building of note we reach on our stroll is the U. S. Treasury, where the surplus cash of the United States is held in reserve. A step brings us to the White House, the home of the President. A trip beyond the White House, about two miles, on the same avenue, brings us to Georgetown, a place of considerable historical interest. A great Catholic university is located here; the home of the late popular writer, Mrs. E. D. E. N. Southworth, is visited by the romantically inclined, while all visit the tomb of John Howard Payne, who wrote the beautiful ballad entitled "Home, Sweet Home."
Washington, D. C. S. F. GILLESPIE.

PURE FOODS!

Is the Battle Cry.

A correspondent intimates that the RURAL WORLD is somewhat partial in its defense of the dairy industry against fraudulent competition in the form of imitation dairy products, and wants to know why we do not attack the manufacturers of jellies and other food products which adulterants so largely enter. We think the gentleman who the RURAL WORLD was unjustly by assuming that the dairy industry is in and effort for purity of food products are limited to dairy products. More is said regarding these latter because dairy people are in the van in the onslaught on the strongholds of fraud in and adulteration of food products.

This matter of pure food is one of the broadest and most vital questions, literally speaking, that can be considered by a people, and we hardly need to say that the RURAL WORLD stands on the side of pure, honest, wholesome foods of all kind. We say, as we have before stated, the nation owes to dairy people a debt of gratitude for their fight for the integrity of their products, which fight, if carried to a successful issue, will make it an easy matter to secure the enactment and enforcement of general pure food legislation. That is what the RURAL WORLD will work for and hopes to see. It will gladly co-operate with anyone to that end.

The pure food army is made up of many divisions; all should fight in harmony, and according to a well-matched plan of campaign. It far outnumbers the enemy, but the latter are entrenched in large commercial centers along with numerous allied interests which make common cause with them, equipped with rapid-fire legal guns and supplied with money. The dairy people are not so well equipped, but they will fight desperately for the retention of the mines that have already yielded fabulous riches, but which are greater than those of a few and the right will prevail. In this connection we want to urge the passage of the bill now before congress known as the Brosius Pure Food Bill.

MONTGOMERY CO., N. E. MO.—Wheat is looking fine, the best it has for years, though acreage sown last fall was small. Oats are all sown and farmers are busy planting corn. Clover was badly frozen out. Stock is looking well.
C. E. S.



MACADAM ROAD ON THE TENNESSEE, UNIVERSITY FARM.

DUNKLIN COUNTY COTTON.—J. P. Tribble of Kennett, Mo., says the farmers in Dunklin County will plant enough cotton this season to make at least 30,000 bales, should the season prove reasonably good. Last season was very unfavorable in that part of the state for raising cotton, only about 12,000 bales being marketed. In the past Dunklin has marketed as high as 20,000 bales in a season.

gina. These herd books proved to be the original books owned by the famous Shorthorn breeder, Thomas Bates, of England, and contain on many pages the marginal notes and explanations of Mr. Bates in his own handwriting, and signed in each instance with his name. These notes are invaluable in pointing out clearly the objects this pioneer breeder hoped to produce by the mating of certain animals, and showing the results attained. The college is to be congratulated on pos-

Horseman.



M. S. Simpson, of Elvins, St. Francis Co., Mo., has purchased from D. W. Layton the stallion Normandy, full brother to the great Delmon, 2:13 1/4.

Frank Rockefeller, Cleveland, O., owns Extractor, a son of Expedition, 2:15 1/4, that will be trained this year. As a three-year-old he trotted the Woodburn Farm track in 2:18 1/4, which Mr. Broadhead says is the fastest mile ever trotted by any three-year-old over the track.

At three years of age Axtell won the stallion crown by trotting in 2:12 to high wheel sulky. He is now 13, and in the last campaign his produce made him the leading sire of his age. Within the last six months five of his get have been sold for \$20,000.

"Looking back over the records of the winter horse sales," says "The Horseman," "we can hardly fail to be impressed with the fact that for every good horse there has been a buyer and that when anything especially meritorious has been offered there has been spirited competition."

Vols. I, II, and III of the American Saddle Horse Register may be had by addressing I. B. Nall, Secretary, Louisville, Ky., and enclosing the price, \$2 per volume. The express charges or postage will be prepaid. Entry blanks, with latest rules for entry, free on application to the secretary.

John R. Gentry is reported as never looking finer and stronger than now. He is 11 years old and grew better under the handling of Andrews as the season of 1899 advanced. As Gentry in his last race in California in 1899 paced a last quarter of the last half in 28 1/2 seconds it gives rise to the belief that Andrews may land him the approaching season across the two-minute line.

The sixth biennial congress of the American Trotting Association will convene at the Auditorium Hotel, Chicago, Tuesday, May 1, 1900, at 12 o'clock noon, for the purpose of electing officers and transacting such other business as may be properly presented for its consideration. The Board of Appeals of the association will meet at the same place, May 1, at 8 p. m., for the transaction of such business as may be brought before it.

A Kentucky horseman has a well bred trotting colt that lately appeared to be troubled with worms. He consulted an experienced farmer and horseman about it, who advised him to use a little tobacco in his feed. He used the prescribed remedy, and since then the colt has been passing a considerable number of large, well-developed tape worms. The gentleman who gave the prescription says that he never before knew a horse troubled with this species of worm.

"If there is anything at a trotting meeting which destroys the comfort of horsemen it is a defective program," observes "Spirit of the Times." "An attractive program at the races is just as essential as a first-class theater. How frequently it is sadly neglected or bungled up by some amateur. It is a pleasure to horsemen to purchase a neatly printed program containing a correct list of the starters, complete breeding of the horses entered in each race, names of drivers, their colors and numbers. Ten cents is not too much for a program of this class. An association had better give the privilege to a good man, and please the public, rather than get a high price for poor goods."

"A good horse, like a good house, is built from the ground up," the superstructure of the future horse being formed in the weaning colt; and while a foal calf sometimes comes out all right in the spring, one that has escaped the worms in its early life, and spread rapidly from one horse to another, until all the animals in a stable may be affected, the atmosphere being the most common carrier of the infection and through it may be communicated to horses at considerable distance. At this season of the year pink eye and distemper prevail to an alarming extent in some sections of the country. The remedy lies first in prevention by occasional fumigation and whitewashing and then by the judicious use of proper remedies with which every stable should be supplied.

The active demand for horses fit to race at much higher prices than last year is not owing to the extra demand for speedway and matinee horses, so much as the prospect for largely increased earnings. There will be more harness racing this year, with bigger stakes and class purses, than in any previous year in the history of trotting turf, and, furthermore," says "The American Sportsman," "there is a more active demand now for high-class trotters for export than

ever before known. In England and Scotland several orders have been given United States buyers for pacers of extreme speed, and it will not be long before the stabled and gartered gentry of France and Germany and Austria will be taking their outdoor constitutional behind the once condemned sidewheelers."

To recur to the subject we were discussing: There is really no reason why the pacer should now be tabooed in Europe, while a generation or two ago there was a pretty good reason why he should not have been highly popular in America, says the "Kentucky Stock Farm." Now he is as fine a horse as the trotter. He has as much finish and he is as great as a race horse, and he is as good as a pacer. Some pacers have gaits that are absolutely perfect. There is really no reason, except the old prejudice against the sidewheelers, why pacers should not take very high rank, and as soon as a European market is opened for pacers much of the discrimination in price between them and trotters will disappear, not by reason of any diminution in the prices of trotters, but by reason of an enhancement in the value of pacers.

Mr. John F. Keck, of Millstadt, Ill., has purchased from the Colman Stock Farm, St. Louis, Mo., the bay trotting stallion, Prince Rene 10:07, sired by King Rene 12:28, first dam by Abdallah, Jr., 5:29, second dam by Mambrino Temple 5:58, son of Pilot Temple, 2:34, third dam by Pilot, Jr., King Rene, the sire of Prince Rene, was a well-known trotting stallion owned by the late Col. H. C. McDowell, of Lexington, Ky. He has been exhibited at the St. Louis Fair on several occasions in contests with the best trotting stallions in America, and was always honored with the first prize. In eighteen contests with the best stallions in Kentucky and elsewhere, he was never beaten. Prince Rene was an almost exact picture of his great sire.

"Strange as it may seem, there will probably be more sons of Electioneer than of George Wilkes in stud service in Kentucky this year," says an exchange. Why strange? asks the "Western Horseman." George Wilkes and Electioneer (through their descendants) are rival sons of Hambleton 10, and the youngest living sons of George Wilkes are 17 years old, while the youngest sons of Electioneer are only nine years old. Besides this, Kentucky is full of George Wilkes blood, and nothing is more reasonable or logical than that Kentucky breeders should want Electioneer blood to mix with the George Wilkes blood. Thoughtful breeders will not fool away their time debating the relative merits of Wilkes blood and Electioneer blood, but they will proceed to double up the two, thus getting to the strength of both instead of sticking to either singly. Soon all will be wanting stock horses of the Wilkes-Electioneer cross.

Owners of horses do not appreciate the value of long, brisk, thorough and regular combing and brushing of horses so well as do European owners. The horse whose coat is neglected is never really in fine condition. The sweat left to dry upon him destroys the natural oil of the hair, and clogs the pores of the skin so that the excretions are reduced, and the impurities that should be thrown off by the pores of the skin are forced back into the animal's system, to the general damage of his health. Comb often, brush thoroughly. The comb will loosen the dead skin and the dried sweat, and the brush will draw both out and stimulate the deposition of the oil that is designed to make and keep the hair smooth and glossy. Don't be economical of strength in giving the horse his brushing. Bear on hard. The horse will like it. The massaging by the brush will be good for him in every way, starting up his circulation, limbering his joints and stimulating his nervous system. No horse was ever too thoroughly combed and brushed. No combing and brushing were ever thrown away.

Axtell is truly the twice crowned king, says the "American Sportsman." At the tender age of three years he won the stallion crown of trotting in 2:12 to the high-wheeled sulky. That performance, before which the once considered marvelous old-style sulky records of such great trotting stallions as Palo Alto, Stamboul, Maxie Cobb, Phalaris, Nelson and Smuggler paled into insignificance, thrilled the turf world from ocean to ocean. Now, at thirteen years of age, before his career at the stud can be considered well begun, Axtell is found a king of sires. In the last campaign his produce made him the leading sire of his age. They have made for him the record of being the sire of two trotters below 2:30, sixteen performers in 2:30, of fifty in 2:30, of thirteen that took standard marks as two-year-olds. Within the last six months in public and private sales, five of his get have been sold for \$20,000, furnishing the truest test of how highly his trotters are regarded in the public market.

The ideal horse of to-day will be the horse of the future. He is pure and simple a high grade American trotting horse. While he has been produced in various forms, the ideal form in my opinion is the horse of 15.2 to 16 hands high, round made, dense bone, firm muscle, good power and much quality, combined with style, form and trotting action. Not knee action of the hackney kind will suffice; we must have speed to go with it. In short, we must have knee and shoulder action combined with size, quality, soundness and finish, to bring big money. Those essentials the American-bred trotter has in a greater degree than the imported article. Now to produce the ideal horse that I am talking about you must select the best types from the best families of American trotters and cross them judiciously. The mistake most breeders make is when a covetous rich man comes along they sell him their best mares and keep their poorest to breed from. The result is that short-sighted breeders have a lot of culprits on hand that they persist in breeding from, thereby accumulating more of the same kind that there is no market for. Then they damn the horse business instead of blaming themselves for being such short-sighted fools as to forget that time-tried mares, bred to the best and from the best.

Gen. B. F. Tracy, ex-Secretary of the Navy, is one of our most advanced trotting horse breeders. In his catalog just issued he says that "Electioneer and George Wilkes are to-day the most potent ancestral factors in the production of harness speed. The combined families carried on further than the second generation now number over 3,150 standard per-

formers, of which Electioneer has 958. Hambletonian and Nutwood are the only other two sires that approach this in numerical strength, with a total of nearly 2,700. But Hambletonian's total for his sons and daughters is practically completed, while there are sons and daughters of George Wilkes not older than 17, and some of Electioneer's are as young as nine years. The book will not be closed on the get of Electioneer's sons and daughters for 20 years, not on Wilkes' for ten years more. It is, however, when dealing with the highest class of race-horse speed, that the influences of Electioneer and Wilkes are pre-eminent. Take last season's 2:10 speed. That is a live test—a crucial test of present fitness. The 2:10 pacers of 1899 are a brilliant band and we find that 42 are of Wilkes and Electioneer descent as against 38 without either. Twenty-one favored previous 2:10 records, and 13 are from Wilkes descendants, or over 60 per cent—a comparative index of training-on capacity."

L. E. CLEMENT'S GOSSIP.

Editor RURAL WORLD: Mambrino, Jr., must have been intoxicated with his ride against the cold winds from Iowa. Electioneer's dam was by St. Clair, the Michigan pacer, and I fall to find where J. W. R. started with Paletta, either in her two or three-year-old race. B. J. W. R. is worth freighting from California I would change his name if I had to mortgage the horse to do it. I would suggest that Mambrino, Jr., make that trip some day when the oxygen was not so bracing and get something right. Maud, his dam, is not credited with a record of 2:30 as a three-year-old or at any other age. Possibly he has been elected and got mixed and also the dam of McV., that was sired by Hiram Woodruff.

The track at Carthage, Mo., has been put in shape, over 10 inches of soil added at the southwest turn, and the turns well filled. With one good rain and a little work the track will not only be fast but in as good condition as any half-mile track I know. There are about 30 horses at work on the track. The largest string is under the management of Thomas Patton, late of Wellesville, Mo. for Frank Haven. The sister to Oolong, by Ben McGregor is probably the most promising. She can take a standard record at either gait. Too soon, by Bonnie McGregor, out of the dam of Jimmy H., 2:21, is a promising filly and will be entered and started at Columbus and Moberly. Thomas Kyle has a sorrel mare by Brownell, son of Lumps, that is pacing fast, and her owner refused \$250 for her last week. Mr. Kyle has a bay daughter of Precursor, son of Nutwood, out of the same mare, that is a promising trotter.

At Galena, Kansas, W. F. Ervin has twenty-nine horses in his string, and he and his brother, D. M., are a couple of busy men about these times. John Kinney stepped through the stretch at 2:16 gait in company with You Bet, 2:12 1/2. Then Don, 2:07 1/2, was taken out to prompt Frank Ervin, 2:29 1/2, but without his hopes the contrast was too big. Frank Ervin (3), 2:29 1/2, 2:13 1/2, will be out with the trotters, and will be a part of the 2:30 line whenever he starts. Lady Ervin, by Precursor, dam Daisy Hanson, by Billy Campbell, son of the Hatoqua, sire Billy Green, will start in slow classes at Moberly and Columbia, and will add another to Precursor's list. The way the initial daughter of the gray son of Electioneer stepped through the stretch at the trot she should be a factor in slow classes in the Western Circuit. Frank says now that the brother of Riley B. has been put to pacing, he is sorry he has not entered him through as Riley B. was. Although Riley B. paced more races than any three-year-old ever did, he is free from blemishes, and as smooth as any three-year-old that never started. The colt is even-gaited, never makes a misstep and each corner comes up with the other three. If he don't get the four-year-old pacing record he ought to.

Two green ones by Victor Ene, dam by Herschel, second dam Cora, by Blue Bell, will pace low this year if given a chance. Of the 29 head a good string will go through the Western Circuit. I have never seen the roast Frank gave Spears in print after he drove Belle J., the first mare. When he came back he said "Victor for God's sake, if there is anything about this mare tell me." Frank told him let go of her, no horse can trot his best and pull four or five hundred pounds on the bit. "I only pull enough to steady her and keep her from breaking." Frank says let go of her and try her, but "what shall I do if she breaks?" But her with her whip, and the next heat she loved record and Ervin said, "You fellows down East want to do all the work in the sulky. We out in the brush let the horses do the trotting." It will be hard to find a better string of developed pacers than Don, 2:07 1/2; Riley B., 2:10 1/2; You Bet, 2:12 1/2, and John Kinney, 2:13 1/2.

Whether he will make any other trotter than Frank Ervin (3), 2:29 1/2, in 2:30 class, is not settled. This week several horses that have been spurted all winter will be given good strong miles and begin to show what they are. One Prince Medium mare that came to Galena a lugger, is now trotting on a loose line. Her dam is Elma Diver, by Diver, son of Onward, and is a good mare.

The friends of Concilio, 2:12 1/2, had an idea that in half-mile heats the horse was invincible, and they got a couple of matches with a gray son of Wm. M., by Wm. L., and were ahead about \$300. When Homer Spencer discovered for some reason the gray was stepping eight inches short on one side, throwing him to the pole with every step, six ounces extra as a toe and side weight on one foot, made the horse go square, and a month's

In every town and village may be had, the Mica Axle Grease that makes your horses glad.

THE HORSE MARKET
Demands Sound Horses Only
Lame horses sell at less than half their actual value, and are neither desirable for use or sale. The remedy is easy. A few bottles of
KENDALL'S SPAIN CURE
will work a permanent cure for spavins, hags, bones, splints, curbs, etc., and all forms of lameness. It cures thousands of cases annually. Such results as the one following are a guarantee of merit.
Kilgore, Penn., Aug. 10, 1899.
"Dear Sir: After using your Spain Cure for splints, hags, bones, splints, curbs, etc., and all forms of lameness, I would like to say that I have seen it cure many cases of lameness. I have used it on a horse that was lame in the fore leg, and it cured him. I have also used it on a horse that was lame in the hind leg, and it cured him. I have also used it on a horse that was lame in the knee, and it cured him. I have also used it on a horse that was lame in the hock, and it cured him. I have also used it on a horse that was lame in the fetlock, and it cured him. I have also used it on a horse that was lame in the hoof, and it cured him. I have also used it on a horse that was lame in the leg, and it cured him. I have also used it on a horse that was lame in the body, and it cured him. I have also used it on a horse that was lame in the head, and it cured him. I have also used it on a horse that was lame in the tail, and it cured him. 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